



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,695	01/23/2004	Michael Ellenbogen	25960-010	7660

30623 7590 06/01/2005

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY
AND POPEO, P.C.
ONE FINANCIAL CENTER
BOSTON, MA 02111

EXAMINER

HQ, ALLEN C

ART UNIT PAPER NUMBER

2882

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8M

Office Action Summary	Application No. 10/763,695	Applicant(s) ELLENBOGEN ET AL.	
	Examiner Allen C. Ho	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,7,10-13 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 3,4,6,8,9 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>032005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 300 (page 9, line 2), 320 (page 9, line 1).
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 600 (Fig. 3); 413, 430, 440, 500, 511, 512, 521, 522, 523, 530 (Fig. 4); 610a, 620a, 630a (Fig. 6D); 710a (Fig. 10B); 810, 811, 812, 810A, 811A, 812A (Fig. 12).
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “300” has been used to designate both detector assemblies (page 9, line 2) and a block flow diagram of a process in Fig. 5.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “320” has been used to designate both circuit boards (page 9, line 1) and a process step in Fig. 5.
5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “413” has been used to designate both HOST/PCI BRIDGE and Algo/PCI BRIDGE (Fig. 4).
6. The drawings are objected to because:
 - (1) Fig. 5 appears to be informal, and some reference numbers are illegible.

- (2) The lineogram and objects contained in Figs. 6C, 6D, 7A, 10A, 10B, 11A, 11B are difficult to see.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The disclosure is objected to because of the following informalities:
 - (1) Page 7, line 19, "110" should be replaced by --111--.
 - (2) Page 7, line 20, "220" should be replaced by --110--.
 - (3) Page 9, line 6, "9" should be replaced by --4--.
 - (4) Page 9, line 7, "gat" should be replaced by --gate--.
 - (5) Page 9, line 11, "411" should be replaced by --414--.
 - (6) Page 12, line 8, "350" should be replaced by --330--.
 - (7) Page 13, line 7, "350" should be replaced by --340--.
 - (8) Page 13, line 21, "not" should be replaced by --no--.

- (9) Page 13, line 22, "360" should be replaced by --350--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 2, 5, 7, 10-13, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Peschmann *et al.* (U. S. Patent No. 5,367,552).

With regard to claims 1, 2, and 5, Peschmann disclosed a method for determining a characteristic of a first object in a package of multiple objects, the method comprising the steps of: creating a lineogram from a CT scan of the package (column 9, lines 39-48); determining a first position in the lineogram wherein the first object is substantially separated from other objects (when the first object being scanned is substantially separated from other objects, column 9, lines 57-59); and determining a characteristic of the first object from data at the position (column 9, lines 46-48; column 9, line 60 - column 10, line 3).

With regard to claim 7, Peschmann disclosed a method for scanning a bag to locate potential threats comprising the steps of: performing a CT scan of the bag; creating a lineogram from the CT scan of the bag (column 9, lines 39-48); selecting positions in the lineogram

Art Unit: 2882

wherein objects are substantially separated from other objects (when the objects being scanned are substantially separated from other objects, column 9, lines 57-59); determining a characteristic of objects from data at the selected position (column 9, lines 46-48; column 9, line 60 - column 10, line 3); and determining whether a threat exists based upon the characteristics of the objects.

With regard to claims 10-13, Peschmann disclosed the method of claim 7, further comprising the steps of changing a speed of the bag passing through the CT scan (column 3, lines 41-45) and changing the resolution of the CT scan (column 11, lines 46-68).

With regard to claim 15, Peschmann disclosed a system comprising: a CT scanner (24) having a rotating gantry (43); a conveyor (20) for advancing bags through the CT scanner during rotation of the gantry; means (26) for creating a lineogram of data from CT scanner (column 9, lines 39-48); means (26) for determining at least one characteristic of objects in a bag based upon the lineogram data (column 9, lines 46-48; column 9, line 60 - column 10, line 3); and means (26) for determining threats based upon the at least one characteristic.

With regard to claim 16, Peschmann disclosed the system of claim 15, further comprising: a drive mechanism for driving the conveyor a predetermined speed; and means (22) for changing the predetermined speed of the drive mechanism upon determination of a threat (column 3, lines 41-45).

With regard to claim 17, Peschmann disclosed the system of claim 15, further comprising means for changing the resolution of data from the CT scanner upon determination of a threat (column 11, lines 46-68).

Allowable Subject Matter

10. Claims 3, 4, 6, 8, 9, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 3 and 4, although the prior art discloses a method for determining a characteristic of a first object in a package of multiple objects comprising the steps of creating a lineogram from a CT scan of the package, determining a first position in the lineogram wherein the first object is substantially separated from other objects, and determining a characteristic of the first object from data at the position, it fails to teach or fairly suggest the steps of determining a cluster index for positions in the lineogram and selecting the first position based upon the clutter index as claimed in claim 3.

With regard to claim 6, although the prior art discloses a method for determining a characteristic of a first object in a package of multiple objects comprising the steps of creating a lineogram from a CT scan of the package, determining a first position in the lineogram wherein the first object is substantially separated from other objects, and determining a characteristic of the first object from data at the position, it fails to teach or fairly suggest the step of determining a center of gravity of the first object, determining a sine wave through the center of gravity of the first object, and modifying data in the lineogram such that data relating to the first object based upon the sine wave as claimed in claim 6.

With regard to claim 8, although the prior art discloses a method for scanning a bag to locate potential threats comprising the steps of performing a CT scan of the bag, creating a

lineogram from the CT scan of the bag , selecting positions in the lineogram wherein objects are substantially separated from other objects, determining a characteristic of objects from data at the selected position, and determining whether a threat exists based upon the characteristics of the objects, it fails to teach or fairly suggest the steps of determining a clutter index for positions in the lineogram and selecting positions in the lineogram wherein the clutter index is less than a predetermined threshold as claimed in claim 8.

With regard to claims 9 and 14, although the prior art discloses a method for scanning a bag to locate potential threats comprising the steps of performing a CT scan of the bag, creating a lineogram from the CT scan of the bag , selecting positions in the lineogram wherein objects are substantially separated from other objects, determining a characteristic of objects from data at the selected position, and determining whether a threat exists based upon the characteristics of the objects, it fails to teach or fairly suggest the steps of determining a center of gravity of a first object having a characteristic of a threat, determining a sine wave through the center of gravity of the first object, and modifying data in the lineogram such that data relating to the first object based upon sine wave as claimed in claim 9.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- (1) Gayer *et al.* (U. S. Patent No. 6,094,467) disclosed a method for improving CT images having high attenuation objects.

Art Unit: 2882

- (2) Gordon (U. S. Patent No. 5,818,897) disclosed a quadrature transverse CT detection system.
- (3) Peschmann *et al.* (U. S. Patent No. 5,182,764) disclosed an automatic concealed object detection system having a prescan stage.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen C. Ho
Primary Examiner
Art Unit 2882

28 May 2005